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Figure 1 (PRIOR ART)

Cross-section of a trench DMOS power transistor cell (prior art, /1,2/).

read & understood *R. K. W. H.* August 10, 1988

read and understood *Randolph D. Neuh* August 11, 1988

*B*

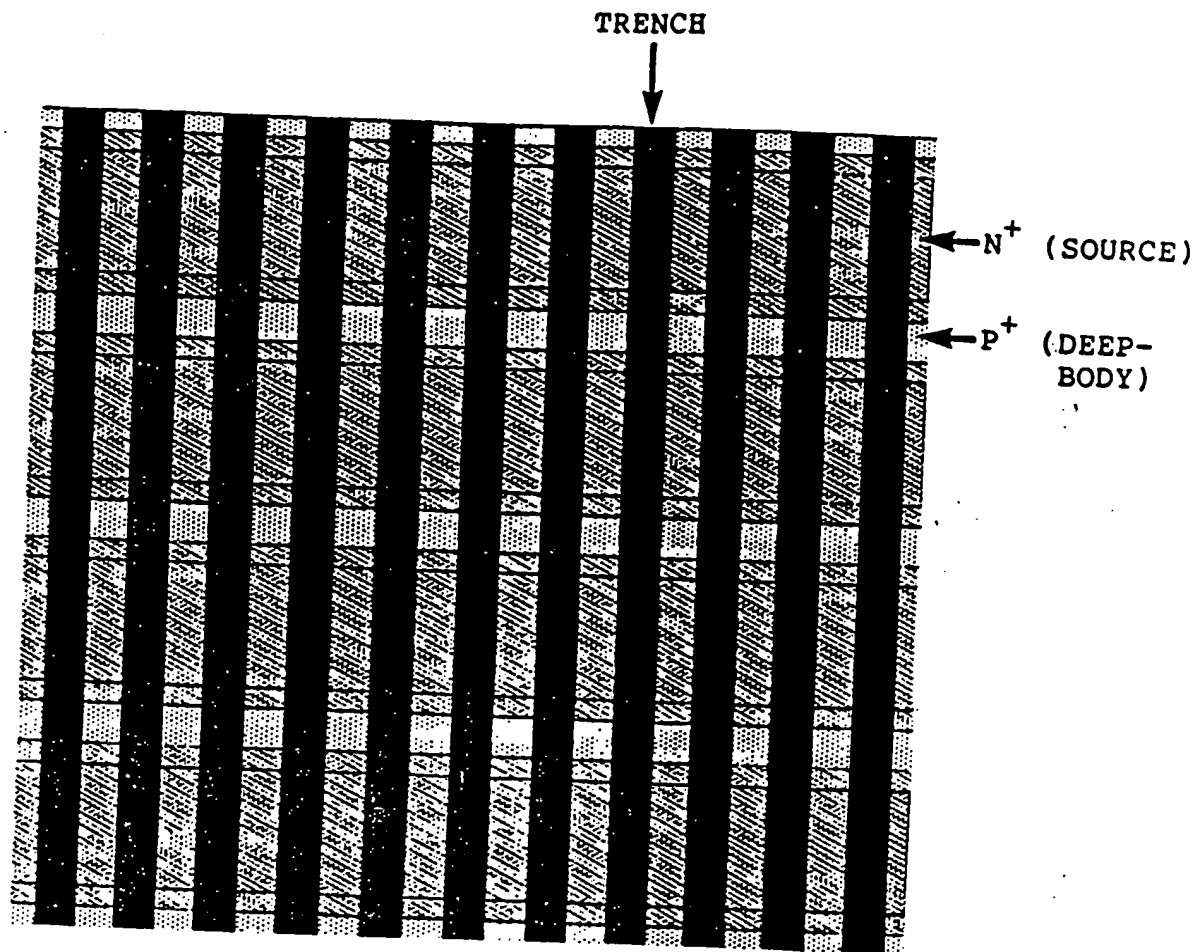


Figure 2,a (PRIOR ART)  
 "Open-cell" implementation of a trenched DMOS  
 power transistor (CALMA hard copy, active region).  
 Siliconix, Inc., 1987.

read + understood QXW August 10, 1988  
 read and understood Randolph D. Webb August 11, 1988

B

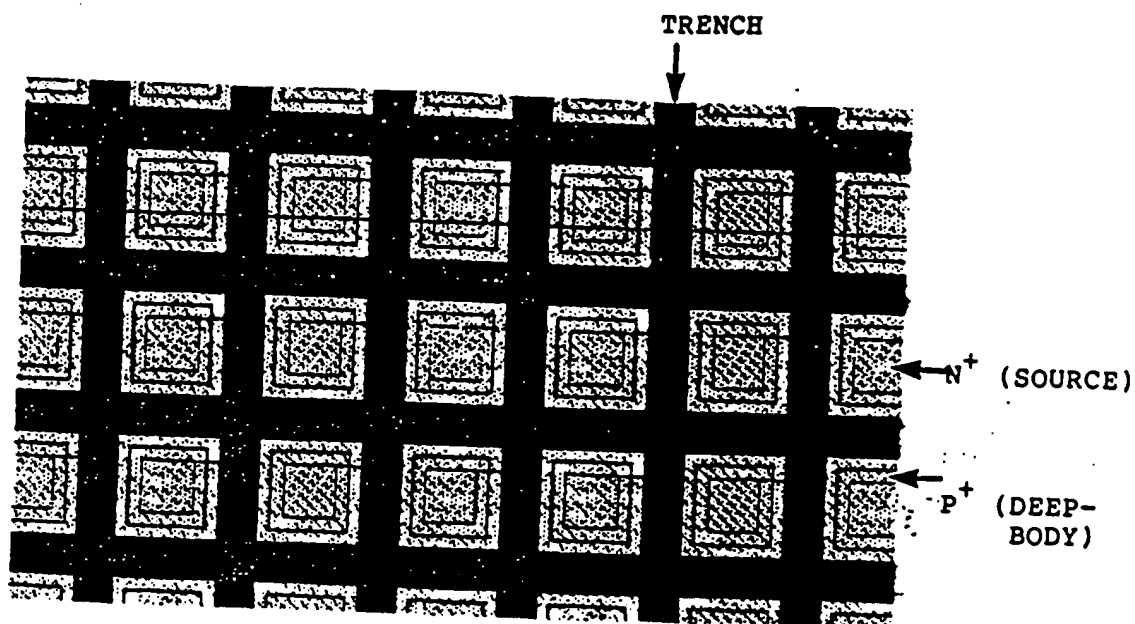


Figure 2,b (PRIOR ART)

"Closed-cell" implementation of a trench DMOS power transistor (CALMA hard copy, active region).  
Siliconix, Inc., 1987.

read + understood J. Q. K. W. H. August 10, 1988  
read and understood Randolph D. Loh August 11, 1988

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A2.4/QD5.3

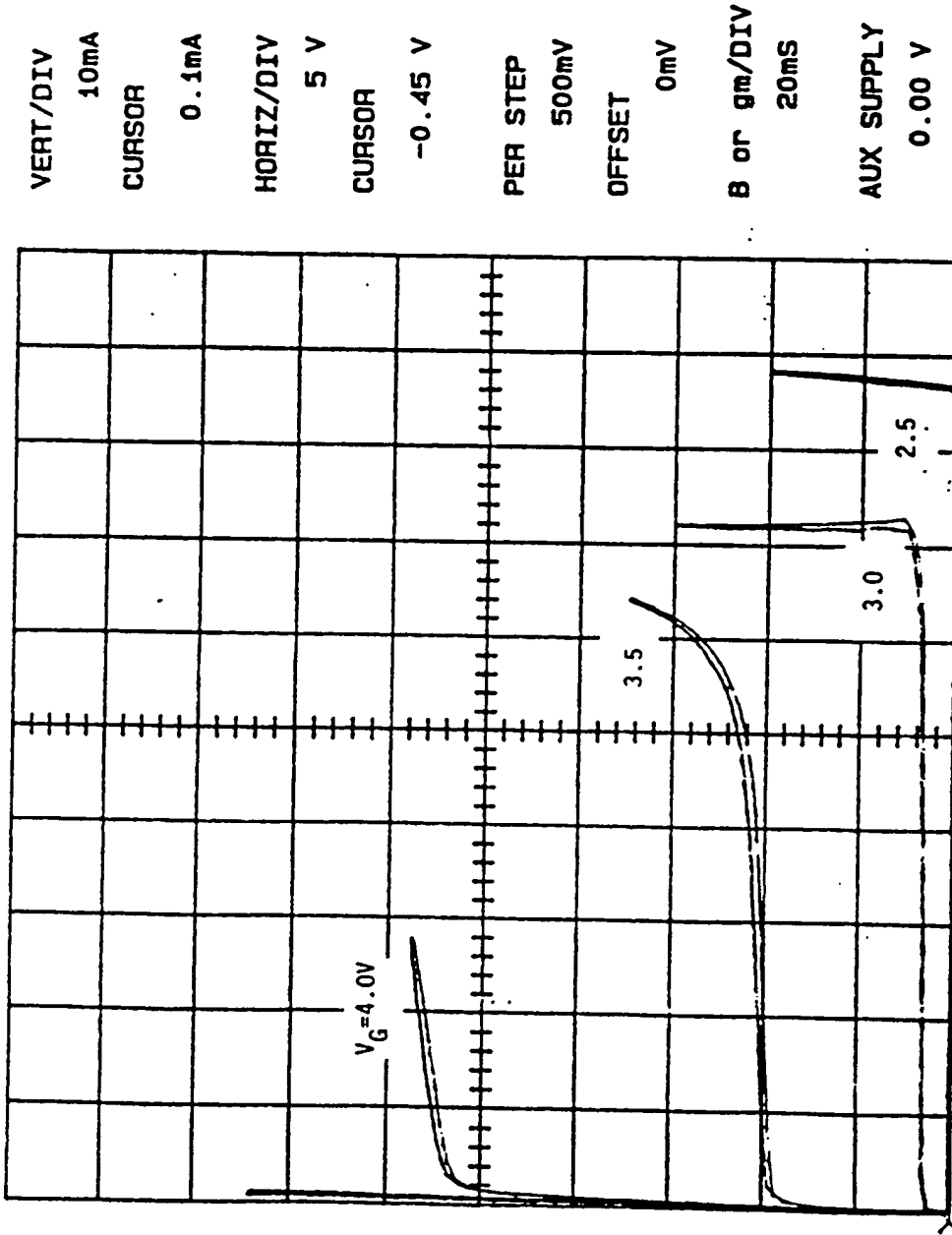


Figure 3,a

Output I-V characteristics of an experimental "open-cell" trench MOS transistor having distant body contacts, perpendicular to the trenches. Siliconix, Inc., 1988.

(Prior Art)

read & understood August 10, 1988  
read and understood August 11, 1988 R. D. H.

B



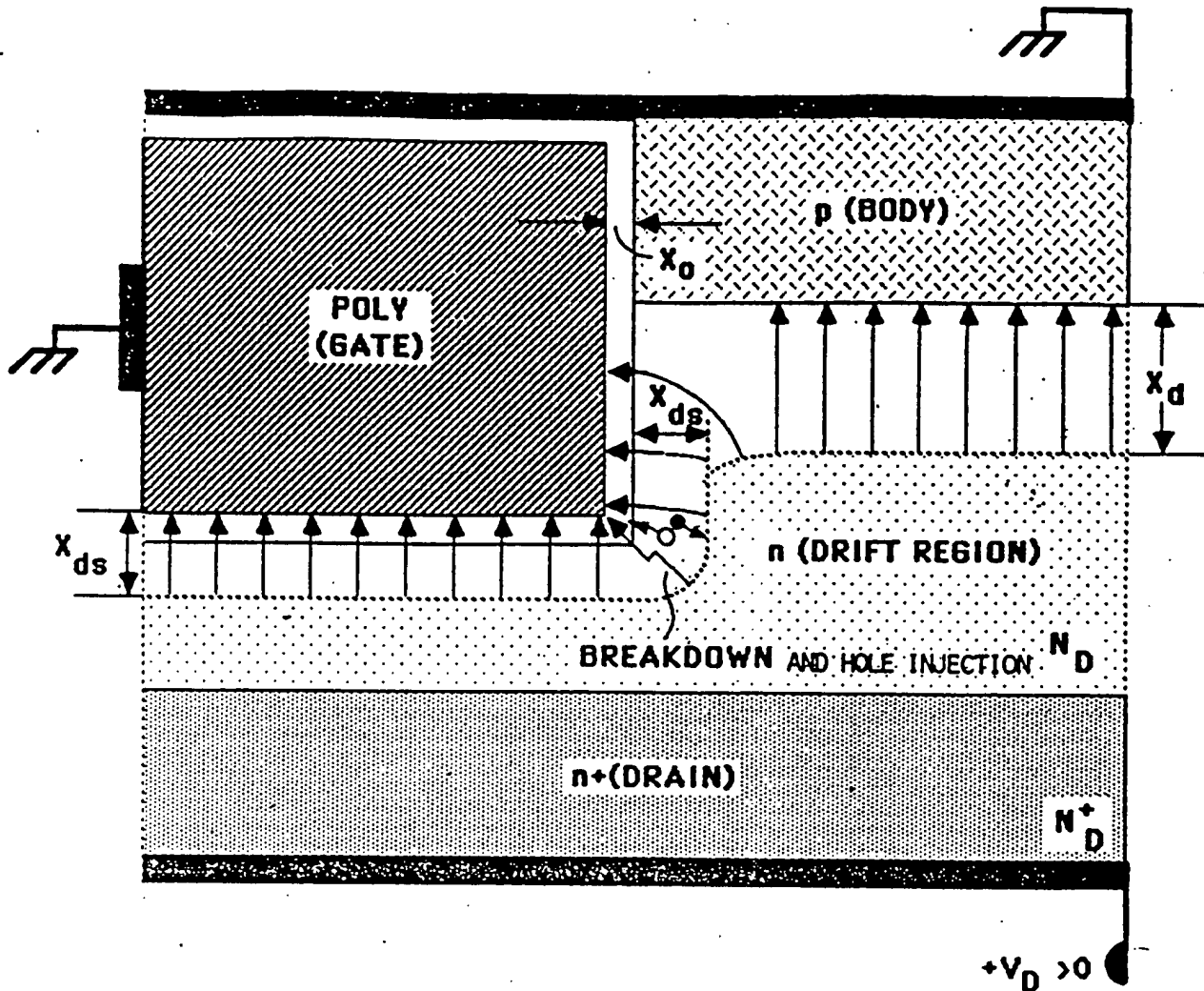


Figure 4 (PRIOR ART)

Qualitative description of the electric-field structure in a trench DMOS transistor having no deep-body profile provision. BVDSS biasing, source junction omitted.

read & understood Q.K.H. August 10, 1988  
 read and understood Randolph D. Mc August 11, 1988

B

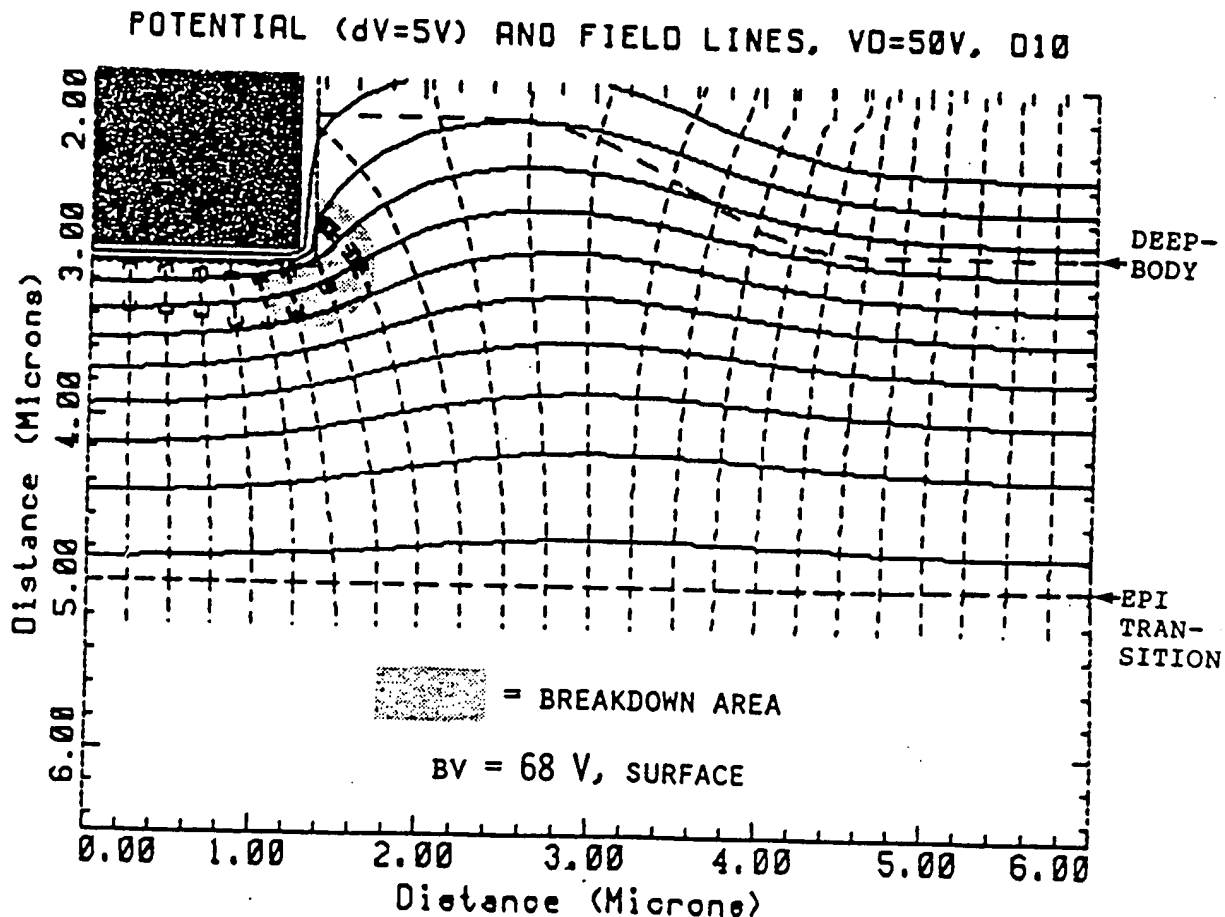


Figure 5 (PRIOR ART)

2-D computer simulation of the BVDSS operation of a trench MOS transistor having the deep body junction shallower than the trench. Drain breakdown takes place beneath the trench surface.

read & understood Q-K WLL August 10, 1988  
 read and understood Ruchoff D. WLL August 14, 1988

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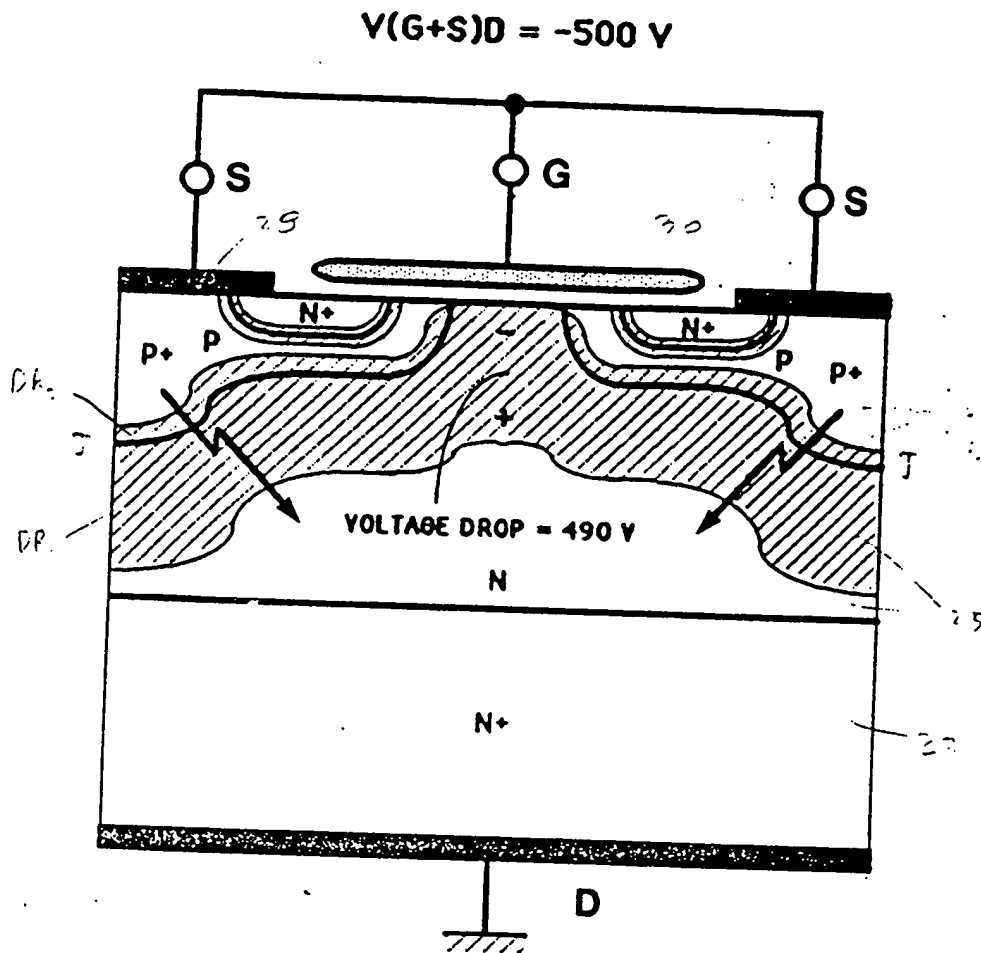


Figure 6 (PRIOR ART)

Junction and depletion-region topology  
of a planar DMOS transistor biased in the BVDSS condition.

rec'd + ... t... QXDA Aug. 10, 1988  
rec'd at ... Randall D. ... Aug. 14, 1988

B



# 2-D OXIDATION SQUARE-CELL DESIGN

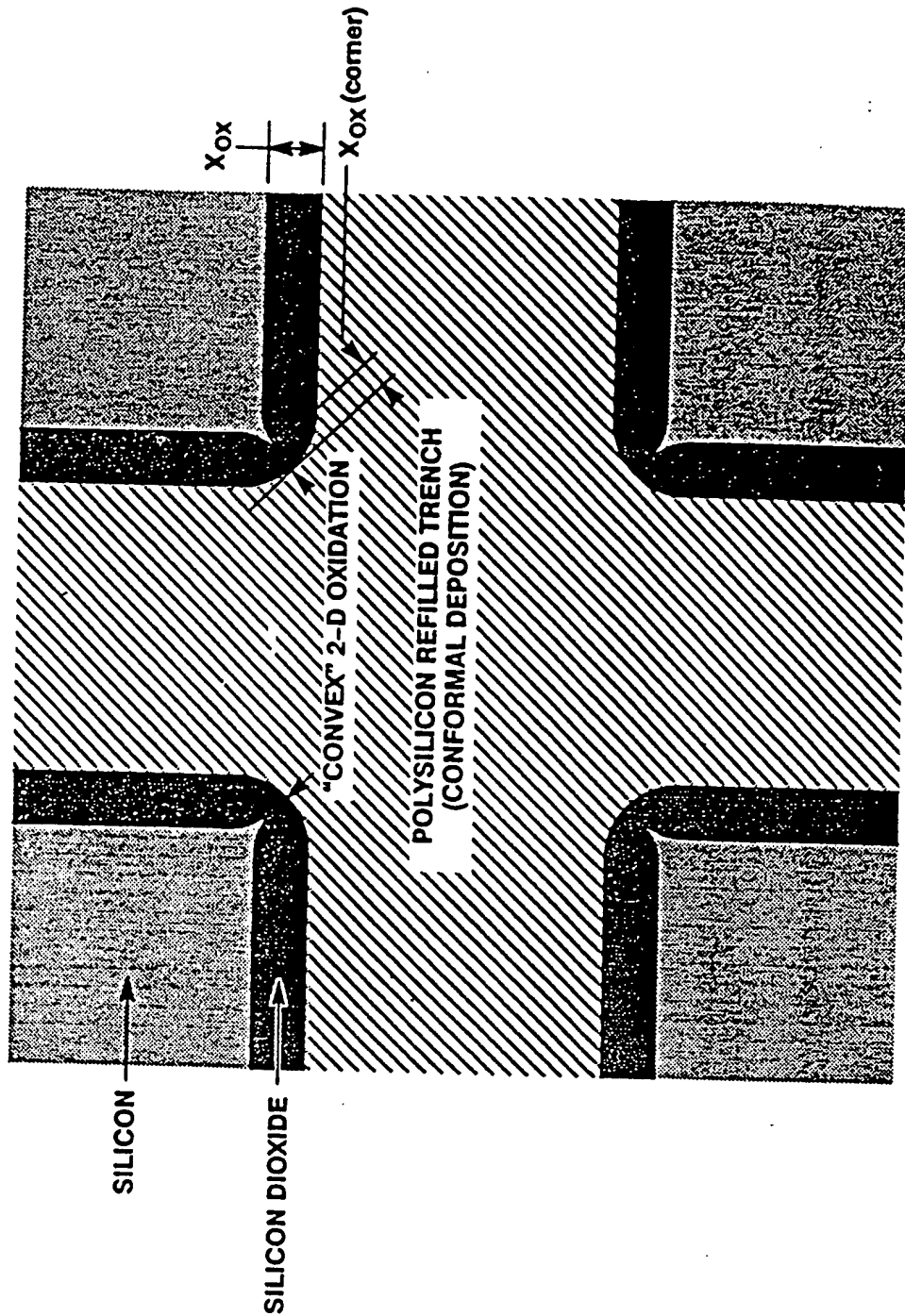


Figure 7 (Prior Art)  
Qualitative description of the oxide profile  
at a rectangular trench intersection.

read & understood QJWA August 10, 1988  
read as understood Paul H. Doherty August 4, 1988

B

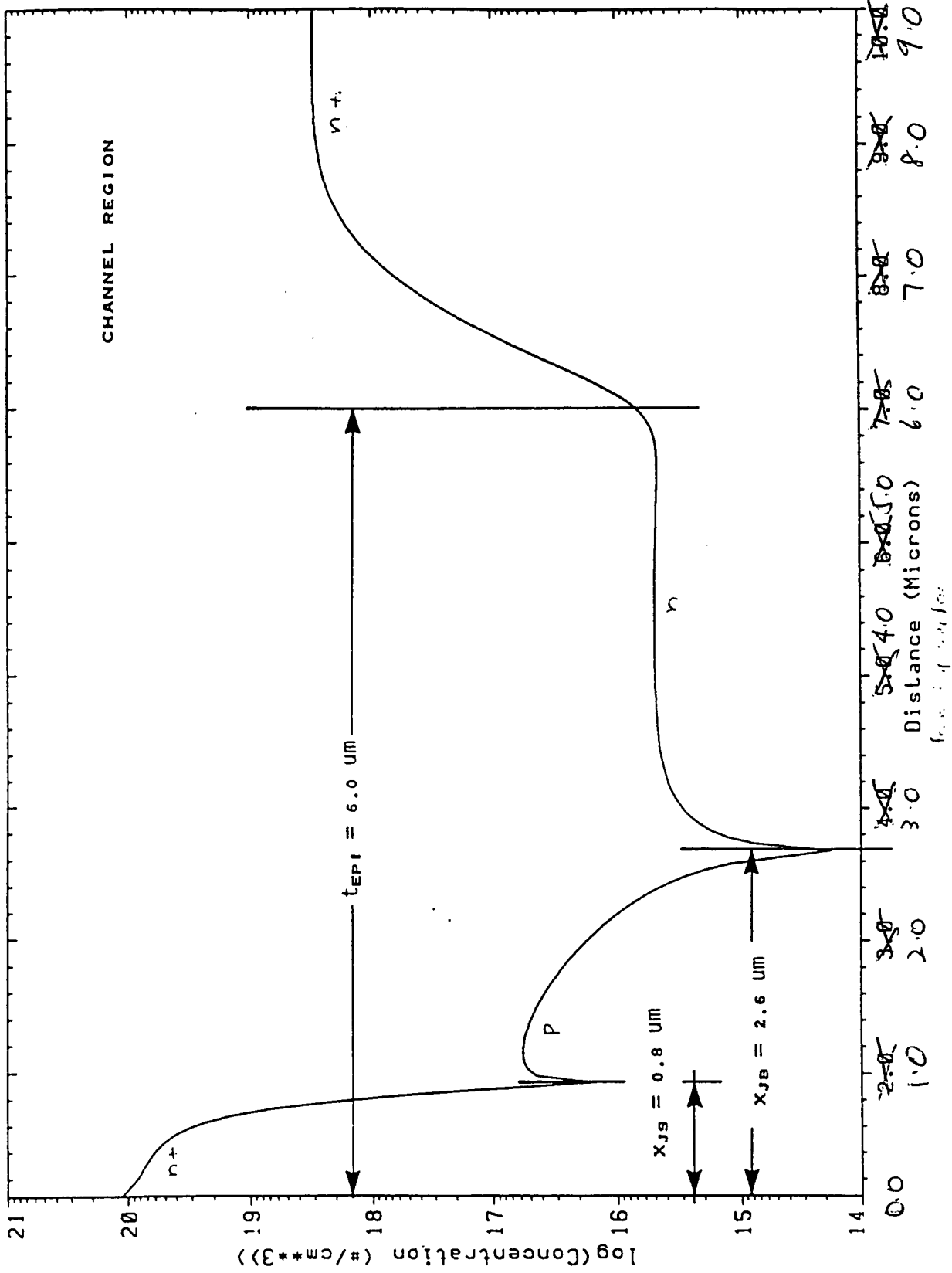


Fig. 11

*[Handwritten signature]*

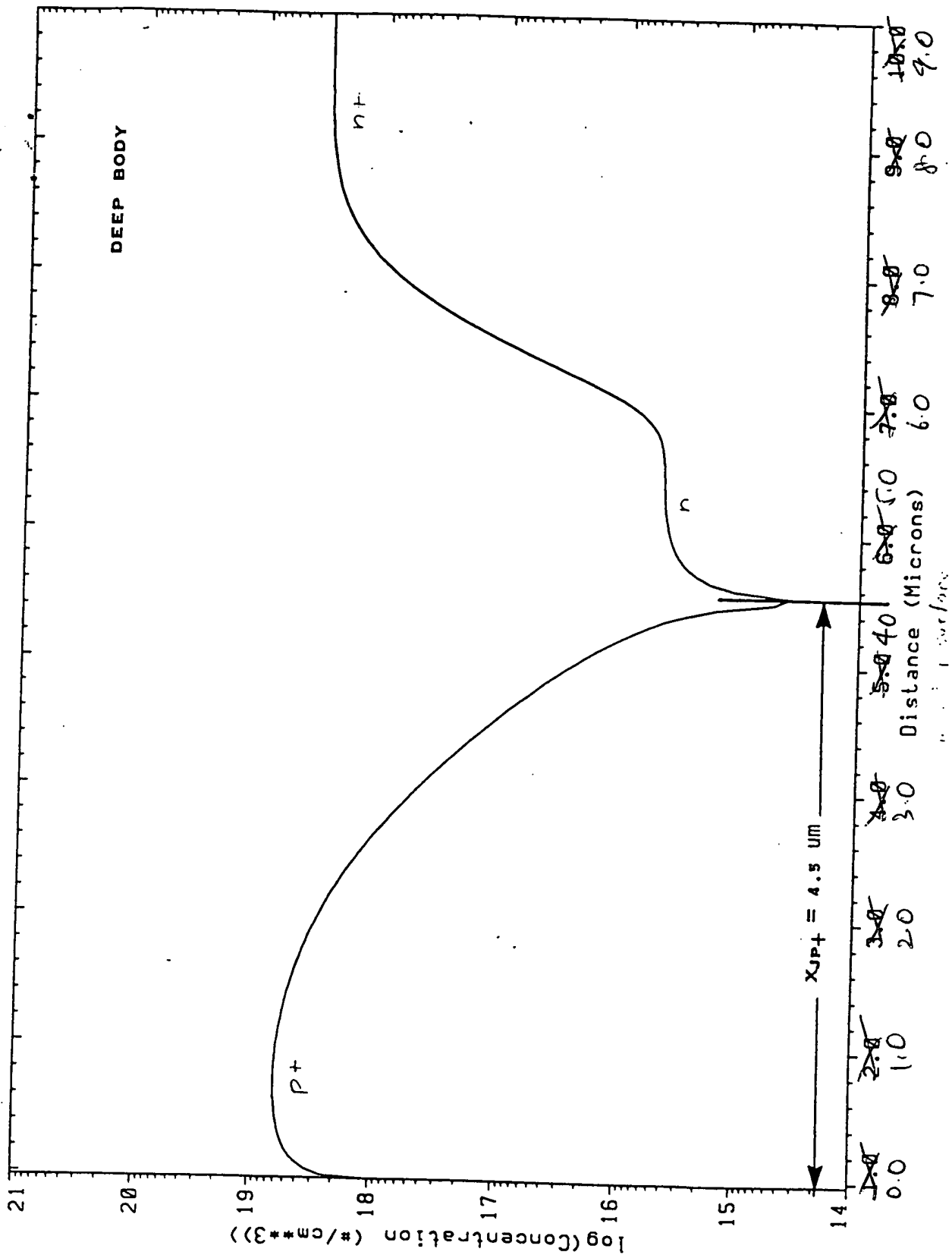


Fig. 12

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